

**IN THE CLAIMS:**

Please write the claims to read as follows:

Please cancel claims 2 and 15 without prejudice.

- 1 1. (Currently Amended) A method comprising:  
2 performing a cyclic redundancy check (CRC) on each of a plurality of code  
3 blocks of a turbo product code (TPC) code word; and  
4 assigning an artificially high probability confidence measure to bits of any of the  
5 plurality of code blocks which pass the CRC; and  
6 iteratively decoding the TPC code word between a soft decision algorithm of a  
7 sequence detector and a TPC decoder using the artificially high probability confidence  
8 measure assigned to bits of code blocks which pass the CRC.
- 1 2. (Cancelled)
- 1 3. (Currently Amended) The method of claim 21, wherein performing the CRC on each  
2 of the plurality of code blocks further comprises performing the CRC on each of the  
3 plurality of code blocks during a first iteration between the soft decision algorithm and  
4 the TPC decoder.
- 1 4. (Original) The method of claim 3, wherein performing the CRC on each of the  
2 plurality of code blocks during the first iteration between the soft decision algorithm and  
3 the TPC decoder further comprises performing the CRC on each of the code blocks after  
4 decoding using the TPC decoder and before the corresponding probability confidence

5 measures from the plurality of code blocks are sent back to the soft decision algorithm.

1 5. (Original) The method of claim 4, wherein performing the CRC on each of the  
2 plurality of code blocks further comprises performing the CRC on each of the plurality of  
3 code blocks during each of a plurality- of iterations between the soft decision algorithm  
4 and the TPC decoder, and wherein assigning the artificially high probability confidence  
5 measure to bits of any of the plurality of code blocks which pass the CRC further  
6 comprises assigning the artificially high probability confidence measure to bits of each  
7 code block which passes the CRC during the iteration in which the code block passes the  
8 CRC.

1 | 6. (Currently Amended) The method of claim 21, wherein the probability confidence  
2 measures are log-likelihood ratios, and wherein assigning the artificially high probability  
3 confidence measure comprises assigning an artificially high log-likelihood ratio.

1 | 7. (Currently Amended) The method of claim 21, wherein the soft decision algorithm is  
2 a soft output viterbi algorithm (SOVA).

1 | 8. (Currently Amended) The method of claim 21, wherein the soft decision algorithm is  
2 a Bahl, Cocke, Jelinek, and Raviv (BCJR) algorithm.

1 | 9. (Currently Amended) The method of claim 21, wherein the TPC code word is a TPC  
2 code word with single parity check (TPC/SPC).

1 10-11. (Cancelled)

1 12. (Currently Amended) A communication system, comprising:

2 iterative decoder implementing circuitry configured to implement the method of  
3 claim 1

4 i) perform a cyclic redundancy check (CRC) on each of a plurality of code  
5 blocks of a turbo product code (TPC) code word;

6 ii) assign an artificially high probability confidence measure to bits of any  
7 of the plurality of code blocks which pass the CRC; and

8 iii) iteratively decode the TPC code word between a soft decision  
9 algorithm of a sequence detector and a TPC decoder using the artificially high  
10 probability confidence measure assigned to bits of code blocks which pass the  
11 CRC.

1 13. (Currently Amended) An apparatus comprising:

2 an iterative decoder having a TPC decoder and a sequence detector implementing  
3 a soft decision algorithm, the iterative decoder configured to iteratively decode a turbo  
4 product code (TPC) code word between the sequence detector and TPC decoder;

5 cyclic redundancy check (CRC) implementing circuitry configured to perform a  
6 CRC on each of a plurality of code blocks of the TPC code word; and

7 pre-determined extrinsic information generating circuitry configured to assign  
8 extrinsic information representing an artificially high probability confidence measure to  
9 bits of any of the plurality of code blocks which pass the CRC, the artificially high  
10 probability confidence measure used by the iterative decoder.

1 14. (Original) The apparatus of claim 13, wherein the cyclic redundancy check  
2 implementing circuitry forms part of the iterative decoder.

1 15. (Cancelled)

1 16. (Currently Amended) The apparatus of claim ~~4~~513, wherein the soft decision  
2 algorithm is a soft output viterbi algorithm (SOVA).

1 17. (Currently Amended) The apparatus of claim ~~4~~513, wherein the soft decision  
2 algorithm is a Bahl, Cocke, Jelinek, and Raviv (BCJR) algorithm.

1 18. (Currently Amended) The apparatus of claim ~~4~~513, wherein the TPC decoder is  
2 configured to decode a TPC code word with single parity check (TPC/SPC).

1 19. (Currently Amended) The apparatus of claim ~~4~~513, wherein the iterative decoder  
2 and the CRC implementing circuitry are configured to perform the CRC on each of the  
3 code blocks after decoding using the TPC decoder and before the corresponding extrinsic  
4 information from the plurality of code blocks are sent back to the soft decision algorithm.

1 20. (Original) The apparatus of claim 19, wherein the iterative decoder and the CRC  
2 implementing circuitry are configured to perform the CRC on each of the plurality of  
3 code blocks during each of a plurality of iterations between the soft decision algorithm  
4 and the TPC decoder, and wherein the predetermined extrinsic information generating  
5 circuitry is configured to assign the extrinsic information representing the artificially high  
6 probability confidence measure to bits of any of the plurality of code blocks which pass  
7 the CRC during the iteration in which the code block passes the CRC.